

CLAIMS

1. A fuel cell comprising:

5 a plurality of unit cells electrically connected to each other, each of
said unit cell having a shared common solid electrolyte membrane, a fuel
electrode disposed on one surface of said solid electrolyte membrane, and
an oxidizer electrode disposed on the other surface of said solid electrolyte
membrane in opposition to said fuel electrode associated therewith; and
10 a low ion conductivity region between adjacent ones of said unit
cells.

2. The fuel cell according to claim 1, wherein said low ion
conductivity feature region is a region of said solid electrolyte membrane
having a groove formed on it.

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3. The fuel cell according to claim 2, wherein said groove is filled
with an insulating resin.

4. The fuel cell according to claim 1, wherein said low ion
20 conductivity region is a region of said solid electrolyte membrane having a
recess formed on it.

5. The fuel cell according to claim 4, wherein said recess is filled with
an insulating resin.

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6. The fuel cell according to claim 3, wherein said insulating resin is

any of a fluorine-based resin, a polyimide-based resin, a phenol-based resin,
and an epoxy-based resin.

7. The fuel cell according to claim 5, wherein said insulating resin is
5 any of a fluorine-based resin, a polyimide-based resin, a phenol-based resin,
and an epoxy-based resin.

8. The fuel cell according to claim 1, further comprising a fuel flow
path for supplying a fuel to two or more of said fuel electrodes, wherein said
10 fuel flow path has a partition, part of which is comprised of said solid
electrolyte membrane.

9. The fuel cell according to claim 1, wherein at least two of said
plurality of unit cells are connected in series.

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10. The fuel cell according to claim 1, wherein at least two of said
plurality of unit cells are connected in parallel.

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